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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/050,018	01/15/2002	Kei-Kang Hung	JCLA7948	5514

7590 10/03/2003

EXAMINER
LEJA, RONALD W

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ART UNIT	PAPER NUMBER
2836	

DATE MAILED: 10/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/050,018	HUNG ET AL.	
	Examiner	Art Unit	
	Ronald W Leja	2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 January 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *15 January 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

1. Claims 9 and 10 are objected to because of the following informalities: In line 18 of Claim 9 and in line 15 of Claim 10, "In" is capitalized. Appropriate correction is required.

2. Claims 9, 13 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The next to the last paragraph in Claim 9 is confusing. The paragraph also does not read upon a Figure; the Examiner thinks the paragraph was intended to read upon Figure 8A. The metes and bounds of Claim 13 are not known as the claim ends with a semi-colon.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore,

the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1, 2 and 8 are rejected under 35 U.S.C. 102(e) as being anticipated by Voldman 6,455,902).

See Figure 3 and wherein the protected IC device is not shown, but understood to be included. See Col. 3, lines 40-48 for Claim 8.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 3-7 and 9-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Voldman.

Addressing Claims 3, 4, 6, 7, 11 and 12, see Figure 11 of Voldman wherein it is illustrated that a number of serially cascaded diodes can be part of the trigger circuit and wherein the diodes can be NMOS implemented; see Col. 6, lines 12-15. AS far as the limitations wherein one trigger signal is from an Ath diode and the second driving signal is from a Bth diode or that the substrate-triggering voltage is greater than, less than or equal to the gate-driving voltage, such limitations are considered to be obvious as mere matters of engineering design choices. The choices depend upon desired triggering speeds and thresholds for the clamping circuits (NMOS or PMOS). See Col. 4, lines 37-62 of Voldman wherein the dynamic relationship between body and threshold values is disclosed. For Claims 5 and 10, see Figure 3. Voldman does not disclose the power ports for the inverters, however, it would have been obvious to utilize the same power lines for powering the inverters as opposed to utilizing a separate source, thereby keeping the design more compact and saving in costs, by having less components. As stated in the rejection above, PMOS can be easily implemented into the design, and as such, would have been obvious. Claims 13 and 14 are drawn to the use of two clamping devices, wherein one is PMOS and the other NMOS. Voldman teaches that ESD protection disclosed is not limited, but can include PMOS (Col. 3, lines 40-48) and that many different trigger circuits can be used (Col. 4, lines 1-9) and that the number of inverters or RC circuits used all affect the relationship between the body voltage and the threshold voltage of the clamping device (NMOS or

PMOS) (Col. 4, lines 36-62 and Col. 5, line 40 thru Col. 6, line 28). It would have been obvious to include more than one (NMOS) clamping device, such as, a second device (PMOS) so as to increase volume of the ESD shunting capabilities of the protection, thereby increasing design reliability and durability.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Lin et al. (6,392,860) has been cited as a matter of interest.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronald W Leja whose telephone number is (703) 308-2008. The examiner can normally be reached on Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on (703) 308-3119. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Ronald W. Leja

Ronald W Leja
Primary Examiner
Art Unit 2836

9/21/03

rwl
September 21, 2003